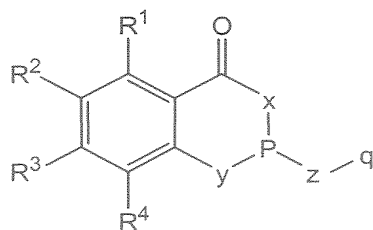


IN THE CLAIMS

Please amend the claims as follows:

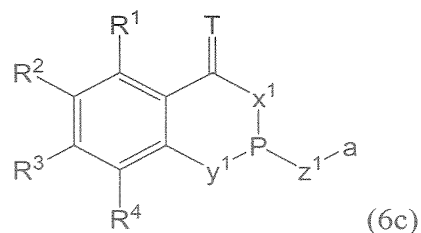
Claims 1-14 (Canceled).

Claim 15 (New): A process for hydroformylating olefins, comprising the reaction of a monoolefin or a monoolefin mixture having from 2 to 25 carbon atoms with a mixture of carbon monoxide and hydrogen in the presence of a heteroacylphosphite of general formula (1) or a corresponding complex with one or more metals of groups 4 to 10 of the Periodic Table of the Elements



(1)

where R¹, R², R³, R⁴ and q are the same or different and are each a substituted or unsubstituted aliphatic, alicyclic, aromatic, heteroaromatic, mixed aliphatic-alicyclic, mixed aliphatic-aromatic, heterocyclic, mixed aliphatic-heterocyclic hydrocarbon radical having from 1 to 70 carbon atoms, H, F, Cl, Br, I, -CF₃, -CH₂(CF₂)_jCF₃ where j = 0-9, -OR⁵, -COR⁵, -CO₂R⁵, -CO₂M, -SiR⁵₃, -SR⁵, -SO₂R⁵, -SOR⁵, -SO₃R⁵, -SO₃M, -SO₂NR⁵R⁶, -NR⁵R⁶, -N=CR⁵R⁶, where R⁵ and R⁶ are the same or different and are each as defined for R¹, and M is an alkali metal, formally half an alkaline earth metal ion, an ammonium or phosphonium ion, x, y, z are each independently O, NR⁷, S, where R⁷ is as defined for q, and x, y, z are not simultaneously O, with the proviso that when q is a radical which has a structural formula (6c)



where the R^1 to R^4 radicals are each as defined for formula (1), x^1 , y^1 , z^1 are each independently O, NR^7 , S, where R^7 is as defined for q, T is an oxygen or an NR^{30} radical, where R^{30} is as defined for q, and the a position serves as the attachment point,

x and x^1 must not simultaneously be N and

x must not be N when T is NR^{30} .

Claim 16 (New): The process as claimed in claim 15,

characterized in that

the R^1 and R^2 , R^2 and R^3 and/or R^3 and R^4 radicals form a fused substituted or unsubstituted aromatic, heteroaromatic, aliphatic, mixed aromatic-aliphatic or mixed heteroaromatic-aliphatic ring system.

Claim 17 (New): The process as claimed in claim 15,

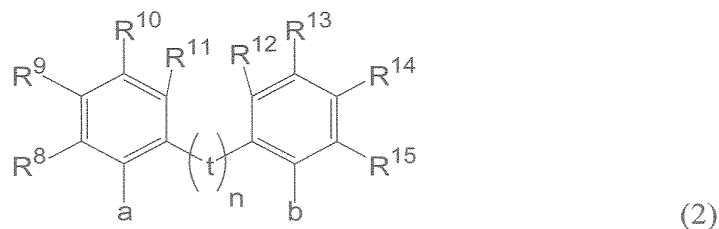
characterized in that

the q radical consists of the W-R radicals where W is a divalent substituted or unsubstituted aliphatic, alicyclic, mixed aliphatic-alicyclic, heterocyclic, mixed aliphatic-heterocyclic, aromatic, heteroaromatic, mixed aliphatic-aromatic hydrocarbon radical having from 1 to 50 carbon atoms, and the R radical is $-OR^5$, $-NR^5R^6$, phosphite, phosphonite, phosphinite, phosphine or heteroacylphosphite of formula (6c), where R^5 and R^6 are the same or different and are as defined for R^1 .

Claim 18 (New): The process as claimed in claim 17,

characterized in that

W is a radical of general formula (2)



where R^8 , R^9 , R^{10} , R^{11} , R^{12} , R^{13} , R^{14} and R^{15} are the same or different and are each as defined for R^1 ,

t is a divalent $CR^{16}R^{17}$, $SiR^{16}R^{17}$, NR^{16} , O or S radical, and R^{16} and R^{17} are each as defined for R^5 and R^6 , $n = 0$ or 1 and the a and b positions serve as attachment points.

Claim 19 (New): The process as claimed in claim 18,

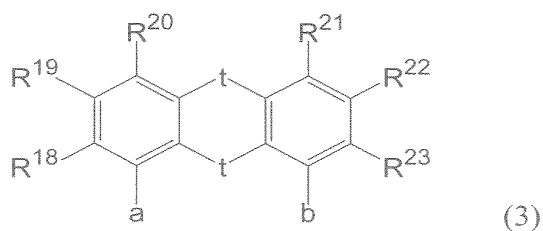
characterized in that

in each case two adjacent R^9 to R^{15} radicals together form a fused substituted or unsubstituted, aromatic, heteroaromatic, aliphatic, mixed aromatic-aliphatic or mixed heteroaromatic-aliphatic ring system.

Claim 20 (New): The process as claimed in claim 18,

characterized in that

W is a radical of general formula (3):



where R^{18} , R^{19} , R^{20} , R^{21} , R^{22} and R^{23} are the same or different and are each as defined for R^1 ,

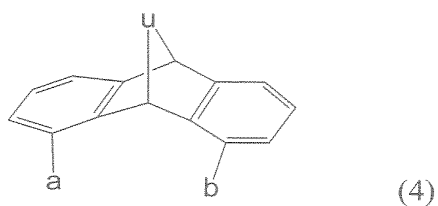
t is a divalent $CR^{16}R^{17}$, $SiR^{16}R^{17}$, NR^{16} , O or S radical, and R^{16} and R^{17} are each as defined for R^5 and R^6 , $n = 0$ or 1 and the a and b positions serve as attachment points.

Claim 21 (New): The process as claimed in claim 20,
characterized in that
in each case two adjacent R^{18} to R^{23} radicals together form a fused substituted or unsubstituted, aromatic, heteroaromatic, aliphatic, mixed aromatic-aliphatic or mixed heteroaromatic-aliphatic ring system.

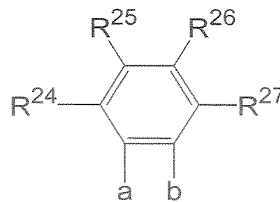
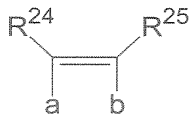
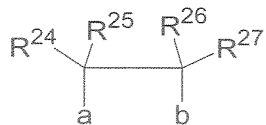
Claim 22 (New): The process as claimed in claim 17,

characterized in that

W is a radical of general formula (4):



where u is a divalent group selected from radicals of formulae (5a), (5b) and (5c)

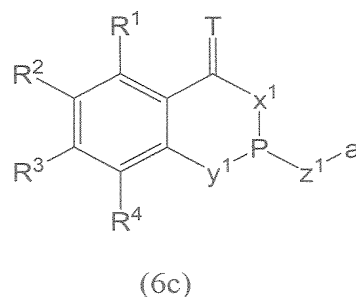
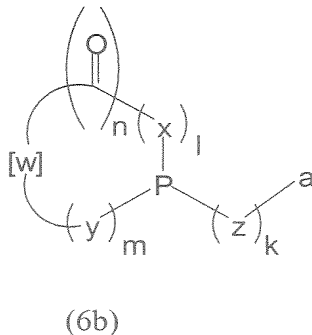
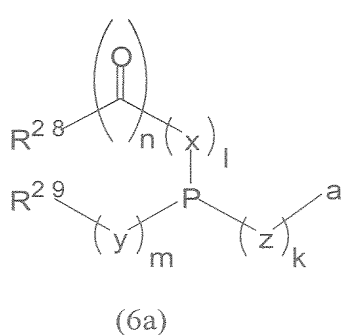


in which R^{24} , R^{25} , R^{26} and R^{27} are the same or different and are each as defined for R^1 , and the a and b positions serve as attachment points.

Claim 23 (New): The process as claimed in claim 22,
characterized in that
two adjacent R^{24} to R^{27} radicals together form a fused substituted or unsubstituted,
aromatic, heteroaromatic, aliphatic, mixed aromatic-aliphatic or mixed heteroaromatic-
aliphatic ring system.

Claim 24 (New): The process as claimed in claim 17,
characterized in that

R represents radicals of general formulae (6a), (6b) and (6c):



where R^{28} and R^{29} are the same or different and are each as defined for R^1 ,

x, y, z and W are each defined as specified and

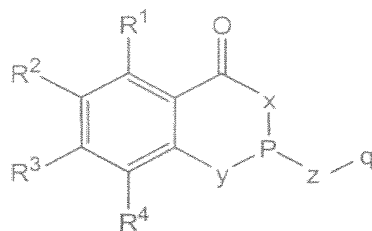
$m = 0$ or 1 , $n = 0$ or 1 , $k = 0$ or 1 , $l = 0$ or 1 ,

and the position a serves as the attachment point.

Claim 25 (New): The process as claimed in claim 15,
characterized in that
the metal of groups 4 to 10 of the Periodic Table is selected from the group consisting
of rhodium, platinum, palladium, cobalt and ruthenium.

Claim 26 (New): The process as claimed in claim 15,
characterized in that
further phosphorus ligands are present.

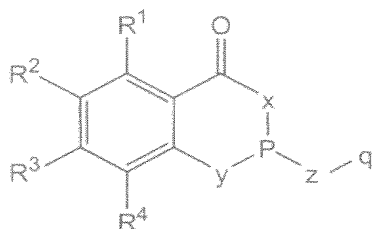
Claim 27 (New): A process for hydrocyanation, isomerization of olefins or
amidocarbonylation in the presence of heteroacylphosphines of formula (1)



(1)

or metal complexes thereof,
where R¹, R², R³, R⁴ and q are the same or different and are each a substituted or
unsubstituted aliphatic, alicyclic, aromatic, heteroaromatic, mixed aliphatic-alicyclic, mixed
aliphatic-aromatic, heterocyclic, mixed aliphatic-heterocyclic hydrocarbon radical having
from 1 to 70 carbon atoms, H, F, Cl, Br, I, -CF₃, -CH₂(CF₂)_jCF₃ where j = 0-9, -OR⁵, -COR⁵,
-CO₂R⁵, -CO₂M, -SiR⁵₃, -SR⁵, -SO₂R⁵, -SOR⁵, -SO₃R⁵, -SO₃M, -SO₂NR⁵R⁶, -NR⁵R⁶,
-N=CR⁵R⁶, where R⁵ and R⁶ are the same or different and are each as defined for R¹, and M
is an alkali metal ion, formally half an alkaline earth metal ion, an ammonium or
phosphonium ion, x, y, z are each independently O, NR⁷, S, where R⁷ is as defined for R¹.

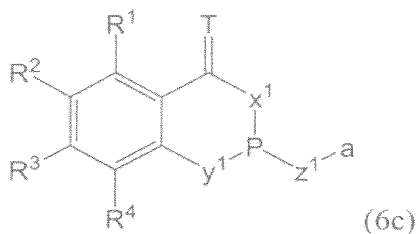
Claim 28 (New): A process for carbonylation in the presence of a heteroacylphosphite of formula (1)



(1)

or metal complexes thereof,

where R^1 , R^2 , R^3 , R^4 and q are the same or different and are each a substituted or unsubstituted aliphatic, alicyclic, aromatic, heteroaromatic, mixed aliphatic-alicyclic, mixed aliphatic-aromatic, heterocyclic, mixed aliphatic-heterocyclic hydrocarbon radical having from 1 to 70 carbon atoms, H, F, Cl, Br, I, $-CF_3$, $-CH_2(CF_2)_jCF_3$ where $j = 0-9$, $-OR^5$, $-COR^5$, $-CO_2R^5$, $-CO_2M$, $-SiR^5_3$, $-SR^5$, $-SO_2R^5$, $-SOR^5$, $-SO_3R^5$, $-SO_3M$, $-SO_2NR^5R^6$, $-NR^5R^6$, $-N=CR^5R^6$, where R^5 and R^6 are the same or different and are each as defined for R^1 , and M is an alkali metal ion, formally half an alkaline earth metal ion, an ammonium or phosphonium ion, x , y , z are each independently 0, NR^7 , S , where R^7 is as defined for q , and x , y , z are not simultaneously 0, with the proviso that when q has a radical which has a structural formula (6c)



(6c)

where the R^1 to R^4 radicals are each as defined for formula (1), x^1 , y^1 , z^1 are each independently O, NR^7 , S, where R^7 is as defined for q, T is an oxygen or an NR^{30} radical, where R^{30} is as defined for q, and the a position serves as the attachment point, x and x^1 must not simultaneously be N and

x must not be N when T is NR^{30} .